

CLAIMS

1. An apparatus for feeding a mold of a plant for the continuous casting of products of rectangular cross section, with molten metal, which comprises:

- a submerged entry nozzle (6) provided with outlets for the molten metal which lie in, or substantially in, the main casting plane (P) parallel to the broad faces of the mold, these outlets differing in their direction of outflow and falling within at least two separate types (7,8);

- an inductive unit (14,15) placed over the broad faces of the mold in order to produce thereon magnetic poles of opposite sign facing each other on each side of said main casting plane (P) and delivering, in its gap substantially surrounding the nozzle (6), a traversing magnetic field covering the outlets of at least one (7) of said types (7,8); and

- means (20,21) for adjusting the relative intensity of said magnetic field, in the region of the outlets of said type (7) which is covered, with respect to the outlets of the other type (8), so as to be able to modify the distribution of the total flow of molten metal between all the outlets of said nozzle (6).

2. The apparatus as claimed in claim 1, wherein said inductive unit is an electromagnetic unit consisting of at least one electromagnet.

3. The apparatus as claimed in claim 1, wherein said inductive unit comprises of inductors (14,15) having a plurality of phase windings of the "traveling field" type, facing each other on each side of said main casting plane (P), and an associated power supply which supplies each of said windings separately with DC current, and wherein the means (20,21) for adjusting the relative intensity of the magnetic field comprise means for moving the location of the magnetic poles in the gap of said electromagnetic unit.

4. The apparatus as claimed in claim 1, wherein said inductive unit comprises of at least one permanent magnet.

5. The apparatus as claimed in claim 2, wherein said means for adjusting the relative intensity of the magnetic field comprise a device for varying the intensity of the electric current supplied to the inductive unit.

6. The apparatus as claimed in claim 2, wherein said means for adjusting the relative intensity of said magnetic field comprise an arrangement in which the magnets or electromagnets can move in a sliding manner.

7. The apparatus as claimed in claim 3, wherein said means for moving the location of the magnetic poles in the gap comprise of means for separately adjusting the intensities of the DC electric currents individually supplying the phase windings of said inductors (14, 15).

8. The apparatus as claimed in claim 1, wherein said inductive unit comprises, on each side of the main casting plane (P), two similar entities (14a, 14b) placed side by side on each side of the casting axis.

9. The apparatus as claimed in claim 1, wherein the submerged entry nozzle is a nozzle provided, in the main casting plane (P), with lower main outlets (7) directed toward the bottom of the mold and with upper secondary outlets (8) directed upward.

10. The apparatus as claimed in claim 9, wherein the lower main outlets form one and the same outlet.

11. The apparatus as claimed in claim 1, wherein the submerged entry nozzle is a nozzle provided, in the main casting plane (P) with a single individual lower outlet directed toward the bottom of the mold.